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**1th Meeting: subgroup – Informal WG on Electrical Safety
(adhocELSA)****Paris – Arche de la Défense****22 October 2009****23 October 2009****Meeting Report****Administrative**

At the beginning of the meeting the French representative asked for the possibility that Heiko Mertens could chair the meeting together with Thomas Goldbach as the secretary. Both explained that they are prepared to do it.

Therefore Mr. Mertens shortly explained the background for the ad hoc meeting.

In preparation of the meeting the secretary incorporated in the document from France the proposed amendments from TÜV (see adhocELSA 1-1). The proposed amendments of ECE R94 are based on the latest (but yet not finalized) outcome of ELSA regarding “post-crash”.

It was agreed to went through the document adhocELSA 1-1 and discuss the proposed amendments.

The outcome of the discussion is document adhocELSA 1-4. In there the amendments are in bold. Amendments which could not be finalized are in brackets and have to be discussed during another meeting of the ad hoc group in January 2010. A description of the amendments you find in Annex 1 of this Meeting Minutes.

General

The general discussion where and how the post-crash requirements have to be incorporated under the '58 agreement was scheduled for Friday the 23. October 2009 together with the French government representative. But he was only available for a half an hour after lunch. He informed the group that France needs the proposal how to amend ECE R94 and ECE R95 for a pre-meeting of the European government representatives for the upcoming GRSP meeting in December 2009.

Regarding a question from OICA about his opinion where to incorporate the post-crash requirements he gave the answer that from his perspective the government representatives in Europe are in favour of amending ECE R94 and ECE R95.

Furthermore in the Terms of Reference of ELSA it is mentioned that the post-crash requirements under the '58 agreement should be incorporated into ECE R94 and R95.

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Independent from the above the final strategy how to handle post-crash under the '58 agreement could not be decided. It was mentioned that also an amendment of ECE R100, a new ECE Regulation or a complete separate annex of ECE R94 and also ECE R95 could also be a solution. To come to a decision the members of the group were asked to consider this alternative in addition until the next meeting.

GRSP meeting December 2009

For the December Meeting of GRSP it was agreed, that France will send an informal document on the basis of adhocELSA 1-4 to Geneva. The brackets will be still in there. They are the indicators that there are still important topics which have to be discussed.

Date and venue of the next Meeting

The following was agreed by the group for the next ad hoc ELSA meeting:

Date: second week of January 2010 (11. – 14. January 2010)

Venue: CCFA (French Automobile Association) in Paris

Thomas Goldbach,

10.11.2009

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Annex 1Content

Annex 11 “Electric Safety – Test Procedures” with Appendix 1 “Protection degrees” have to be added.

1. Scope

No amendment for the moment.

2. Definitions

To the definition of vehicle type (2.6) “the place of the RESS was added”. Regarding this amendment the attending crash-expert from BMW raised concerns that the wording has to be discussed with the crash-experts in depth. As he was the only crash-expert attending the meeting, the wording has to be put into brackets for further discussion.

The definition of passenger compartment (2.7) was expanded by a definition which is only used in conjunction with the “post-crash” requirements. As this is a new approach to have a double meaning in the regulation the amendment was put in brackets for depth discussion with the crash-experts.

From 2.15 to 2.30 all other necessary definitions regarding post-crash are added.

To the definition of electric energy-conversion system (2.17) the fuel cell as an example was added.

As barrier (2.27) is already used in ECE R94 with a different meaning then it is used regarding post-crash an alternative wording has to be found. Therefore the definition was put into brackets.

Furthermore all definitions in the document are aligned with the definitions of ECE R100.

3. Application for Approval

Under 3.2.6 a general description of the RESS was added. Furthermore as long as it is not decided that the place of the RESS will be added to the definition of vehicle type (2.6) the word “location” stays in brackets.

As long as it is not clear whether the general requirement “the high voltage system shall be energized” is necessary, paragraph 1.4.4.1 stays in brackets.

4. Approval

No amendment for the moment.

5. Specifications

Under 5.2 the range of paragraphs was extended to 5.2.8

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Paragraph 5.2.8 with its sub-paragraphs was added. They define the requirements which the vehicle has to fulfil after the crash-test.

Furthermore it was agreed that coolant of the battery has not to be considered as long as it could be identified as such.

It was also agreed to re-introduce all four options mentioned in the post-crash subsection of ELSA (isolation resistance, voltage, energy, physical protection).

6. Instructions for users of vehicles equipped with airbags

No amendment for the moment.

7. Modification and extension of approval of the vehicle type

No amendment for the moment.

8. Conformity of production

No amendment for the moment.

9. Penalties for non-conformity of production

No amendment for the moment.

10. Production definitely discontinued

No amendment for the moment.

11. Transitional provisions

No amendment for the moment but OICA mentioned that TP's will be necessary.

12. Names and addresses of technical services responsible for conducting approval tests, and of administrative departments

No amendment for the moment.

Annex 1 – Communication

5.3 RESS localisation was added.

Annex 2 – Arrangements of the approval mark

No amendment for the moment.

Annex 3 – Test procedure

Paragraph 1.4.4 "Electric powertrain adjustment" with the sub-paragraphs was added.

In the future it may be possible that designs will come to the market where a combustion engine continuously charges a RESS. Therefore the experts should consider how in the far future tests with a running combustion engine could be conducted. The main challenge will be the fuel.

Annex 4 – Determination of performance criteria

No amendment for the moment.

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Annex 5 – Arrangement and installation of dummies and adjustment of restrain systems

No amendment for the moment.

Annex 6 – Procedure for determining the “H” point and the actual torso angle for seating positions in motor vehicles

No amendment for the moment.

Annex 7 – Test procedure with trolley

No amendment for the moment.

Annex 8 – Technique of measurement in measurement tests: instrumentation

No amendment for the moment.

Annex 9 – Definition of deformable barrier

No amendment for the moment.

Annex 10 – Certification procedure for the dummy lower leg and foot

No amendment for the moment.

Annex 11 – Electric safety – test procedures

This annex was added to ECE R94. It describes how the electric safety requirements have to be checked during the crash-tests.

Under paragraph 2 “Bus voltage” the requirement to measure 5 seconds after the vehicle coming to rest after each crash has to be checked by the experts from OICA whether this is realistic or not. Therefore this requirement is in brackets.

It was agreed by the group that paragraph 3 has to be replaced by Annex 4 of the new ECE R100 (see ECE/TRANS/WP.29/GRSP/2009/16).

Under paragraph 4 “Electrical energy” the question in between which two time limits the product has to be integrated could not be answered. Furthermore t_0 and t_1 have to be re-named because both are already used in ECE R94 for crash purposes.

The experts from OICA have to come up with a proposal for the next meeting of the ad hoc group.

Annex 11 – Appendix 1 – Protection degrees

In this new appendix the requirements regarding the protection degree IPXXB are described.